

Abstract

5 A system-level design and simulation environment utilizing a process specification
tool that is programmatically integrated with the system level design and simulation
environment thereby enabling the process-flexible design and simulation of Micro Electro-
Mechanical Systems (MEMS) devices and other micro-fabricated devices is disclosed. The
process specification tool is a software tool for specifying the details of the fabrication process
and enables the separation of the process data from the system-level design and simulation
10 environment. The process specification tool retrieves the process data, which may include
both the process specification and material properties data. The separation of this process data
from the system-level design and simulation environment allows the system-level model to
have process-related parameters whose specification is not fixed, but rather is tied by
reference to the process data. The tying of components to the process data allows the system-
15 level environment to extract multiple process parameters for each component model instead of
requiring duplicate entry of these parameters in each component model, a time-consuming
and error prone process. Modifications of the process data are programmatically
communicated to the system-level environment. The dynamic response to changes in the
process data allows alternative simulations to be run more effectively and quickly than in
20 traditional IC design environments.